Amendments to the Claims

1 Claim 1 (original): A method of enabling data access and manipulation from a pervasive device,

2 comprising steps of:

3   receiving a data access request from a pervasive device;

4   obtaining the requested data;

5   determining what data manipulation operations are available for the obtained data, as well

6 as a location of each available data manipulation operation; and

7   returning the determined data manipulation operations and locations to the pervasive

8 device, in addition to the obtained data.

1 Claim 2 (original): The method according to Claim 1, further comprising steps of:

2   requesting operation of a selected one of the determined data manipulation operations; and

3   performing the requested operation, wherein the performing step is executed by another

4 device on behalf of the pervasive device.

1 Claim 3 (original): The method according to Claim 1, wherein the determining step further

2 comprises determining what data manipulation operations are available for a content type of the

3 obtained data.

1 Claim 4 (original): The method according to Claim 3, wherein the determining step further

2 comprises determining what data manipulation operations are available for a user of the pervasive

3 device.

Serial No. 09/848,394   -4-   Docket MLDRE2001001

1 Claim 5 (original): The method according to Claim 3, wherein the determining step further

2 comprises determining what data manipulation operations are available for a current location of the

pervasive device.

1 Claim 6 (original): The method according to Claim 1, wherein the determining step further

2 comprises determining what data manipulation operations are available for a user of the pervasive

3 device.

1 Claim 7 (original): The method according to Claim 6, wherein the step of determining what data

2 manipulation operations are available for the user of the pervasive device further comprises

3 obtaining information about the user from a protocol header of the data access request.

1 Claim 8 (original): The method according to Claim 6, wherein the step of determining what data

2 manipulation operations are available for the user of the pervasive device further comprises

3 obtaining information about access privileges of the user.

1 Claim 9 (original): The method according to Claim 8, wherein the information about access

privileges of the user is obtained from a repository which stores access privilege information.

Serial No. 09/848,394   -5-   Docket MLDRE2001001

1   Claim 10 (original): The method according to Claim 1, wherein the determining step further

2   comprises determining what data manipulation operations are available for a user group of which a

      user of the pervasive device is a member.

1   Claim 11 (original): The method according to Claim 1, wherein the determining step further

2   comprises determining what data manipulation operations are available for a current location of the

3   pervasive device.

1   Claim 12 (original): The method according to Claim 11, wherein the step of determining what data

2   manipulation operations are available for the current location of the pervasive device further

3   comprises accessing a global positioning system ("GPS") function of the pervasive device or a

4   location registry associating the pervasive device with a plurality of access points.

1   Claim 13 (original): The method according to Claim 1, wherein the determining step further

2   comprises determining what data manipulation operations are available for the pervasive device.

1   Claim 14 (original): The method according to Claim 13, wherein information used in the step of

2   determining what data manipulation operations are available for the pervasive device is obtained

3   from a protocol header which specifies types of content accepted by the pervasive device.

1   Claim 15 (original): The method according to Claim 13, wherein information used in the step of

2   determining what data manipulation operations are available for the pervasive device is obtained

Serial No. 09/848,394   -6-   **Docket MLDRE2001001**

3   from a protocol header which specifies browser capabilities of a browser operating on the

4   pervasive device.

1   Claim 16 (original): The method according to Claim 13, wherein information used in the step of

2   determining what data manipulation operations are available for the pervasive device is obtained

3   by analyzing capability information provided by the pervasive device.

1   Claim 17 (original): The method according to Claim 13, wherein information used in the step of

2   determining what data manipulation operations are available for the pervasive device is obtained

3   from a repository which specifies capabilities of the pervasive device.

1   Claim 18 (original): The method according to Claim 2, wherein the requested operation is a file

2   storage operation.

1   Claim 19 (original): The method according to Claim 2, wherein the requested operation is a print

2   operation.

1   Claim 20 (original): The method according to Claim 2, wherein the requested operation is one of a

2   fax operation, an e-mail operation, a project operation, or a voice mail application.

Serial No. 09/848,394   -7-   Docket MLDRE2001001

1   Claim 21 (original): The method according to Claim 2, further comprising the step of annotating

2   selected ones of the locations of the determined data manipulation operations with an identifier of

3   respective ones of the obtained data.

1   Claim 22 (original): The method according to Claim 2, further comprising the step of annotating

2   selected ones of the returned data manipulation operations and locations with one or more cookies

3   which were present on the received data access request.

1   Claim 23 (original): The method according to Claim 2, further comprising the step of annotating

2   selected ones of the returned data manipulation operations and locations with one or more

3   parameters for use by the performing step.

1   Claim 24 (currently amended): The method according to Claim 23, wherein a selected set of the

2   parameters which are returned to the pervasive device [[and]] are provided in the requesting step

3   and are then used by the performing step.

1   Claim 25 (original): The method according to Claim 23, wherein the annotating step is performed

2   by a protocol proxy component which receives the data access request in the receiving step, and

3   wherein the annotating step is performed prior to operation of the returning step.

1   Claim 26 (original): The method according to Claim 25, wherein the determining and returning

2   steps are performed by the protocol proxy.

Serial No. 09/848,394   -8-   Docket MLDRE2001001

1   Claim 27 (original): The method according to Claim 25, wherein the protocol proxy receives

2   requests and transmits responses using Hypertext Transfer Protocol ("HTTP") messages.

1   Claim 28 (original): The method according to Claim 25, wherein the protocol proxy receives

2   requests and transmits responses using Wireless Session Protocol ("WSP") messages.

1   Claim 29 (original): The method according to Claim 25, wherein the protocol proxy receives

2   requests and transmits responses using Simple Mail Transfer Protocol ("SMTP"), Post Office

3   Protocol ("POP" or "POP3"), or Internet Message Access Protocol ("IMAP") messages.

1   Claim 30 (original): The method according to Claim 25, wherein the protocol proxy receives

2   requests and transmits responses using a synchronization protocol.

1   Claim 31 (original): The method according to Claim 25, wherein the protocol proxy is configured

2   to accept requests from the pervasive device.

1   Claim 32 (original): The method according to Claim 25, wherein the protocol proxy and the

2   pervasive device communicate through a wireless access point.

1   Claim 33 (original): The method according to Claim 2, wherein:

Serial No. 09/848,394   -9-   Docket MLDRE2001001

2   the locations comprise address information for each determined data manipulation

3   operation;

4   the requesting operation step further comprises issuing a request using the address

5   information of the selected data manipulation operation; and

6   the performing step further comprises executing a service which is located using the

7   address information of the issued request.

1   Claim 34 (original): The method according to Claim 1, wherein the returning step further .

2   comprises returning at least one graphical symbol or icon for particular ones of the returned data

3   manipulation operations and locations.

1   Claim 35 (original): The method according to Claim 1, wherein the determining step further

2   comprises accessing a data structure to locate information used by the returning step, wherein the

3   data structure stores information about the data manipulation operations that are available for the

4   obtained data and the location of each available data manipulation operation.

1   Claim 36 (original): The method according to Claim 35, wherein new data manipulation

2   operations are supported for use in the determining step by adding information about the new data

3   manipulation operations and the location of each new data manipulation operation to the data

4   structure.

Serial No. 09/848,394   -10-   Docket MLDRE2001001

1 Claim 37 (original): The method according to Claim 1, wherein the determining step further

2 comprises:

3   accessing a data structure to locate information used by the returning step, wherein the data

4 structure stores information about the data manipulation operations that are available for the

5 obtained data; and

6   dynamically determining the location of each available data manipulation operation.

1 Claim 38 (original): The method according to Claim 37, wherein the dynamically determining step

2 further comprises evaluating at least one of current processor load and current network conditions.

1 Claim 39 (original): The method according to Claim 2, wherein the requesting step is performed

2 by a user of the pervasive device.

1 Claim 40 (original): The method according to Claim 2, wherein the requesting step is performed

2 programmatically without intervention of a user of the pervasive device.

1 Claim 41 (original): The method according to Claim 2, further comprising the step of

2 programmatically requesting, by a protocol proxy, a selected data manipulation operation on the

3 obtained data, and wherein the returning step returns a result of the selected data manipulation

4 operation as the obtained data.

Serial No. 09/848,394   -11-   Docket MLDRE2001001

1   Claim 42 (original): The method according to Claim 1, further comprising the step of

2   automatically invoking one or more of the determined data manipulation operations.

1   Claim 43 (original): The method according to Claim 42, wherein the automatically invoking step

2   operates before the returning step.

1   Claim 44 (original): The method according to Claim 1, further comprising the steps of:

2   determining one or more selected data manipulation operations that should be performed

3   automatically on the obtained data;

4   performing the selected data manipulation operations on the obtained data, thereby creating

5   transformed data; and

6   using the transformed data as the obtained data for the step of determining what data

7   manipulation operations are available.

1   Claim 45 (original): The method according to Claim 2, further comprising the step of dispatching

2   the requested operation, by a manager which receives the operation request, to the other device

3   prior to operation of the performing step.

1   Claim 46 (original): The method according to Claim 45, further comprising the step of passing

2   information to the manager along with the operation request, wherein the passed information

3   enables the manager to ensure that the performing step operates on data which is identical to the

4   returned data.

Serial No. 09/848,394   -12-   Docket MLDRE2001001

1   Claim 47 (original): The method according to Claim 46, wherein the passed information comprises

2   one or more cookies which are present in a header of the data access request.

1   Claim 48 (original): The method according to Claim 1, wherein operation of the steps requires no

2   additional software on the pervasive device.

1   Claim 49 (original): The method according to Claim 1, wherein operation of the steps requires no

2   additional hardware on the pervasive device.

1   Claim 50 (original): A system for enabling data access and manipulation from a pervasive device,

2   comprising:

3   means for receiving a data access request from a pervasive device;

4   means for obtaining the requested data;

5   means for determining what data manipulation operations are available for the obtained

6   data, as well as a location of each available data manipulation operation; and

7   means for returning the determined data manipulation operations and locations to the

8   pervasive device, in addition to the obtained data.

1   Claim 51 (original): The system according to Claim 50, further comprising:

2   means for requesting operation of a selected one of the determined data manipulation

3   operations; and

Serial No. 09/848,394   -13-   Docket MLDRE2001001

4   means for performing the requested operation, wherein the means for performing is

5   executed by another device on behalf of the pervasive device.

1   Claim 52 (original): Computer program instructions for enabling data access and manipulation

2   from a pervasive device, the computer program instructions embodied on one or more computer

3   readable media and comprising:

4   computer program instructions for receiving a data access request from a pervasive device;

5   computer program instructions for obtaining the requested data;

6   computer program instructions for determining what data manipulation operations are

7   available for the obtained data, as well as a location of each available data manipulation operation;

8   and

9   computer program instructions for returning the determined data manipulation operations

10   and locations to the pervasive device, in addition to the obtained data.

1   Claim 53 (original): The computer program instructions according to Claim 52, further

2   comprising:

3   computer program instructions for requesting operation of a selected one of the determined

4   data manipulation operations; and

5   computer program instructions for performing the requested operation, wherein the means

6   for performing is executed by another device on behalf of the pervasive device.

Serial No. 09/848,394   -14-   Docket MLDRE2001001

1   Claim 54 (original): A method of enabling a pervasive device to access and manipulate remotely-

2   stored data, comprising steps of:

3   receiving a data access request from the pervasive device;

4   obtaining the requested data;

5   determining what data manipulation operations are available for the obtained data, as well

6   as a location of each available data manipulation operation; and

7   returning the determined data manipulation operations and locations to the pervasive

8   device, in addition to the obtained data.

1   Claim 55 (original): A method of accessing and manipulating remotely-stored data from a

2   pervasive device, comprising steps of:

3   requesting an access of the remotely-stored data from the pervasive device; and

4   receiving the requested data at the pervasive device, along with information about one or

5   more data manipulation operations that have been determined to be available for the obtained data.

1   Claim 56 (original): The method according to Claim 56, wherein the information further comprises

2   a location of each available data manipulation operation.

1   Claim 57 (original): The method according to Claim 56, further comprising the step of requesting

2   operation of a selected one of the data manipulation operations.

Serial No. 09/848,394   -15-   Docket MLDRE2001001